

REMARKS

Claims 1-20 are currently pending in the application. Claims 1, 7-8, and 10-17 have been amended with this response and are believed to be in condition for allowance. No new matter has been added. Reconsideration of the application in light of the following remarks is respectfully requested.

I. OBJECTION TO THE DISCLOSURE

The disclosure was objected to due to informalities. In particular, the Related Applications section was objected to for serial numbers being left blank. A replacement paragraph is submitted with this response, wherein the serial numbers and dates of filing have been included, thus rectifying the informality.

The specification was also objected to for failing to disclose the term "inertial response time". The term "inertial response time" has been removed from the claims with this response. For the purposes of clarifying the current specification, "inertial response time" is herein defined as being associated with the "wafer impact time", wherein "wafer impact time" is clearly defined in the specification (see, e.g., Specification, p. 11, Ins. 7-9 and Figs. 2B and 4B).

Accordingly, withdrawal of the objections to the informalities is respectfully requested.

II. REJECTION OF CLAIMS 1-20 UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

Claims 1-20 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Claims 1, 8, 11-14, and 16-17 have been amended with this response, wherein "inertial response time" has been replaced with "wafer impact time", and no new matter has been added. The term "wafer impact time" is clearly defined in the specification and figures as "the elapsed time between when the wafer leaves and returns to its initial position" (see, e.g., Specification, p. 11, Ins. 7-9 and Figs. 2B and 4B). Therefore, applicants submit that claims 1-20 are now enabling to one skilled in the art in order to make and/or use the invention.

Accordingly, withdrawal of the rejection of claims 1-20 is respectfully requested.

III. REJECTION OF CLAIM 15 UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claim 15 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 15 has been amended and is now believed to be definite.

Accordingly, withdrawal of the rejection of claim 15 is respectfully requested.

IV. REJECTION OF CLAIMS 1-3, 6-8, 13, 18, AND 20 UNDER 35 U.S.C. § 103(a)

Claims 1-3, 6-8, 13, 18, and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,754,391 (Bates) in view of U.S. Patent 5,325,261 (Horwitz). As stated above, claims 1, 7-8, and 13-17 have been amended with this response, and no new matter has been added. Withdrawal of the rejection is requested for at the least the following reasons.

i. Neither Bates nor Horwitz determine a single-phase square-wave clamping voltage, wherein the determination is based, at least in part, on a wafer impact time, as recited in claim 1.

As recited in claim 1, the method of the present invention is directed toward determining a single-phase square-wave clamping voltage for clamping a wafer to an electrostatic chuck. *The determination is based, at least in part, on a wafer impact time*, wherein the wafer impact time is associated with the wafer leaving and returning to its initial position on the electrostatic chuck. Bates and Horwitz fail to teach or suggest such a determination. Consequently, a combination of the teachings of Bates with the teachings of Horwitz does not result in the present invention.

ii. Horwitz appears to teach away from a single-phase square-wave clamping voltage.

Insofar as Horwitz appears to teach an oscillating drive voltage, the implications of utilizing such an oscillating drive voltage, according to Horwitz, appears to result in deleterious transient currents and voltages in the wafer (see, e.g., col. 2, Ins 22-27). Consequently, Horwitz suggests a less abrupt waveform, such as a sine wave, however, the sine wave further appears to provide deleterious periods when the wafer is not held, wherein weakening or shattering of the wafer can result (see, e.g., col. 2, Ins. 28-35). Therefore, Horwitz appears to teach away from the utilization of a single-phase square-wave clamping voltage, such as that recited in the present claims. Accordingly, the combination of references is improper.

iii. Bates and Horwitz remain silent regarding a predetermined escape distance that is generally defined by a wafer impact time, wherein wafer impact time is further associated with the RC time constant of the electrostatic chuck, as recited in claim 13.

Claim 13 recites a system comprising an electrostatic chuck, wherein the electrostatic chuck has an RC time constant associated therewith, and wherein a predetermined escape distance is generally defined by a wafer impact time. The wafer impact time, according to claim 13, is further associated with the RC time constant of the electrostatic chuck. Again, Bates and Horwitz remain silent in regards to such a feature. As a consequence, the combination of the references to arrive at the presently claimed invention is improper.

Accordingly, withdrawal of the rejection of claims 1-3, 6-8, 13, 18, and 20 is respectfully requested.

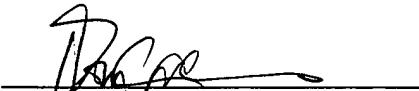
V. CONCLUSION

For at least the above reasons, the claims currently under consideration are believed to be in condition for allowance.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should any fees be due as a result of the filing of this response, the Commissioner is hereby authorized to charge the Deposit Account Number 50-1733, EATNP148US.

Respectfully submitted,
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CERTIFICATE OF MAILING (37 CFR 1.8a)

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: November 9, 2004


Christine Gillroy

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